



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,341	09/27/2001	Samir S. Soliman	010427	3719

23696 7590 02/23/2004

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

PAN, YUWEN

ART UNIT	PAPER NUMBER
----------	--------------

2682

DATE MAILED: 02/23/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/965,341

Applicant(s)

SOLIMAN, SAMIR S.

Examiner

Yuwen Pan

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Response to Arguments

1. Applicant's arguments filed 12/8/03 have been fully considered but they are not persuasive.

The applicant argues that the prior art of record doesn't teach a limitation of "a processor for processing said base band frequency to produce out-of-channel received samples". The Examiner respectfully disagrees because Horner reference teaches that a communication device down-converts a receive signal to a base band signal. One processing block receives the base band signal and output a pilot signal, an out-of-channel signal. Both the pilot and base band signal then pass to another block, decoder in order to output the on channel signals (see figure 1 and 2).

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Horner et al (US005357544A).

Horner discloses a communication receiver comprising:

A receiver portion (see figure 2 and item 16) for down converting a received signal to base band frequency (see column 3 and lines 44-57);

Art Unit: 2682

A low pass filter (see figure 2 and item 30) for filtering said base band frequency to produce on-channel received samples (see column 6 and line 47- column 7 and line 9)

A processor for processing said base band frequency to produce out-of- channel received samples (see column 4 and lines 48-62).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2,3, 6-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horner et al (US005357544A) in view of Soliman (US006321090B1).

With respect to claim 6, Horner discloses a method in a communication system comprising:

Down converting a received signal to produce on-channel and out-of-channel received samples (see figure 2, column 3 and lines 44-57);

Processing said on-channel received samples to decode on channel information (see figure 2, 3e-3l, column 7 and line 59-column 9 and line 4)

Processing said out-of-channel received sampled to determined a link quality (pilot signal, see column 2 and lines 43-45)

Horner doesn't disclose Processing said out-of-channel received sampled to determined a GPS originated information.

Art Unit: 2682

Soliman discloses mobile unit receives a GPS data (see column 2 and line 52- column 3 and line 15).

It would have been obvious to one ordinary skill in the art at the time the invention was made to combining the teaching Soliman with Horner's method such that position of selective base station is determined for better hard handoff.

With respect to claim 8, Soliman further discloses link quality is related to determining a hard handoff candidate and said global position system information is related to a position a receiver in said communication system (see column 2 and line 52- column 3 and line 15).

With respect to claims 9-11, Horner discloses a method comprising:

Receiving a broad band signal including signals from an on-channel traffic channel base station and from an out-of-channel pilot channel base station, wherein frequency of signals of said on-channel traffic channel and said out-of-channel channel pilot is different (see figure 1 and 2 and column 2 and lines 43-48);

Down converting said received broad band signal to on -channel traffic channel received samples and out-of-channel received samples (see figure 2, column 3 and lines 44-57);

Horner doesn't disclose determining a hard handoff candidate in a mobile station.

Soliman discloses determining a hard handoff candidate in a mobile station (see column 2 and line 52- column 3 and line 15).

It would have been obvious to one ordinary skill in the art at the time the invention was made to combining the teaching Soliman with Horner's method such that position of selective base station is determined for better hard handoff.

Art Unit: 2682

With respect to claims 12, 16, Soliman discloses said determined quality of said pilot channel is used to determine whether a source of said pilot channel is a hard hand off candidate (see column 6 and lines 32-38, column 7 and lines 40- column 8 and line 8).

With respect to claims 13-15, Horner discloses a mobile receiver comprising:

A receiver portion for receiving a broad band signal including signals from an on channel traffic channel base station and from an out-of-band pilot channel base station, wherein frequency of signals of said on-channel traffic channel and said out-of-band channel pilot channel is different (see figure 1 and 2 and column 2 and lines 43-48);

An intermediate frequency portion for down converting said received broad band signal to on -channel traffic channel received samples an out-of-channel pilot channel received samples (see column 3 and lines 51-58).

Horner doesn't disclose an intermediate frequency is a zero intermediate frequency.

The examiner takes "Official Notice" of the fact that is notoriously well-known in the art to have a ZIF in a mobile terminal, in order to down converting broad band signal to narrow bands.

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to utilize a zero IF to down converting broad band signal to narrow bands.

With respect to claim 17-19, Horner discloses a processor comprising:

An input portion for receiving down converted a received signal in a form of on-channel and out-of-channel received samples;

Horner doesn't disclose Processing said out-of-channel received sampled to determined a GPS originated information.

Art Unit: 2682

Soliman discloses mobile unit receives a GPS data (see column 2 and line 52- column 3 and line 15).

It would have been obvious to one ordinary skill in the art at the time the invention was made to combining the teaching Soliman with Horner's method such that position of selective base station is determined for better hard handoff.

With respect to claims 2 and 7, Horner discloses a receiver back-end portion for processing said on-channel and out-of-channel received samples essentially at the same time to decode said on-channel received samples to decode on channel information (see figure 2, 3e-3l, column 7 and line 59-column 9 and line 4)

Processing said out-of-channel received sampled to determined a link quality (pilot signal, see column 2 and lines 43-45)

Horner doesn't disclose Processing said out-of-channel received sampled to determined a GPS originated information.

Soliman discloses mobile unit receives a GPS data (see column 2 and line 52- column 3 and line 15).

It would have been obvious to one ordinary skill in the art at the time the invention was made to combining the teaching Soliman with Horner's method such that position of selective base station is determined for better hard handoff.

With respect to claim 3, the examiner takes "Official Notice" of the fact is notoriously well-known in the art to include an oscillator for producing a signal at essentially the same frequency as an on-channel frequency, in order to down covert broad band to narrow band.

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to include an oscillator in a down converter in order to down convert broad band to narrow band.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horner et al (US005357544A) in view of Bottomley (WO 98/19491).

Horner discloses an analogous system as recited in claim 1. Horner doesn't disclose a low noise amplifier for amplifying said received signal for process in said receiver.

Bottomley discloses a low noise amplifier for amplifying said received signal for process in said receiver (see page 6 and line 24-page 7 and line 15).

It would have been obvious to one ordinary skill in the art at the time the invention was made to combine the teaching of Bottomley with Horner's system such that received signal would be amplified for further decoding processing.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horner et al (US005357544A) in view of Willey (US005854785A).

Horner discloses an analogous system as recited in claim 1. Horner doesn't disclose said receiver back-end portion includes a number of fingers element and searcher for processing said on-channel and out-of-channel received samples.

Willey discloses a receiver back-end portion includes a number of fingers element and searcher for processing said on-channel and out-of-channel received samples (see figure 1 and items 107 and 109, column 5 and line 22- column 6 and line 26).

Art Unit: 2682

It would have been obvious to one ordinary skill in the art at the time the invention was made to combine the teaching of Willey with Horner's system such that signal strengths from neighbor base stations are measured simultaneously.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuwen Pan whose telephone number is 703-305-7372. The examiner can normally be reached on 8-5 M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Yuwen Pan
February 16, 2004



LEE NGUYEN
PRIMARY EXAMINER